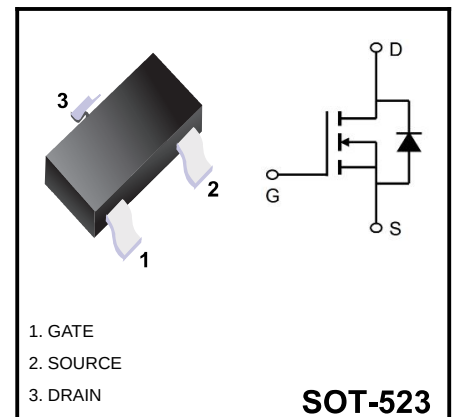


60V N- Channel Plastic-Encapsulate MOSFETS

MAIN CHARACTERISTICS

I_D	115mA
V_{DSS}	60V
$R_{DS(on)}-typ(@V_{GS}=10V)$	$<5\Omega$ (Typ: 0.9 Ω)



Marking Code

2N7002T	K72
----------------	------------

FEATURES

- ♦High density cell design for low RDS(ON)
- ♦Voltage controlled small signal switch
- ♦Rugged and reliable
- ♦High saturation current capability

APPLICATIONS

- ♦Load Switch for Portable Devices
- ♦DC/DC Converter

MAXIMUM RATINGS ($T_A=25^{\circ}\text{C}$ unless otherwise noted)

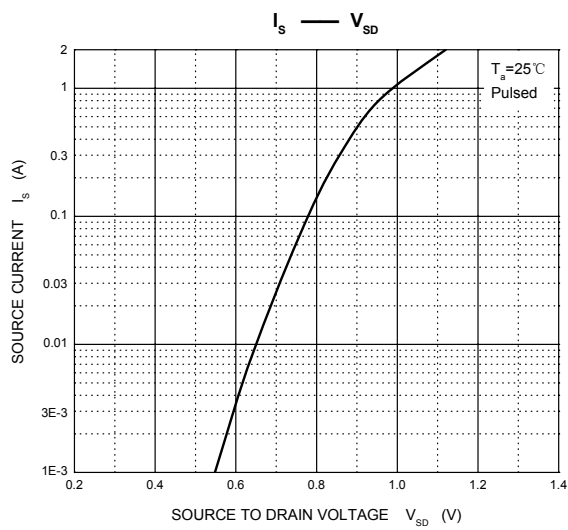
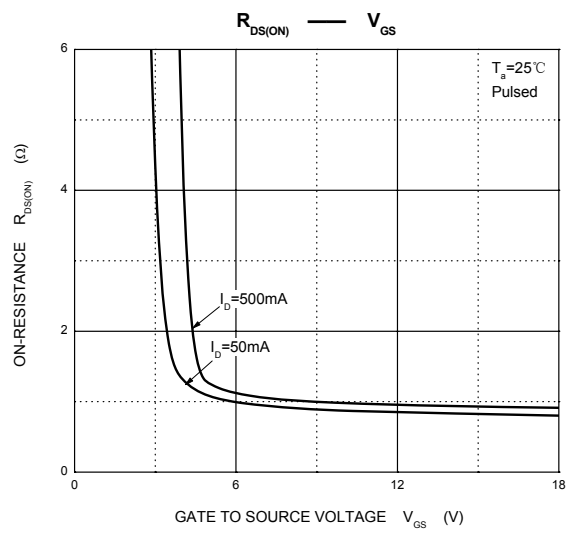
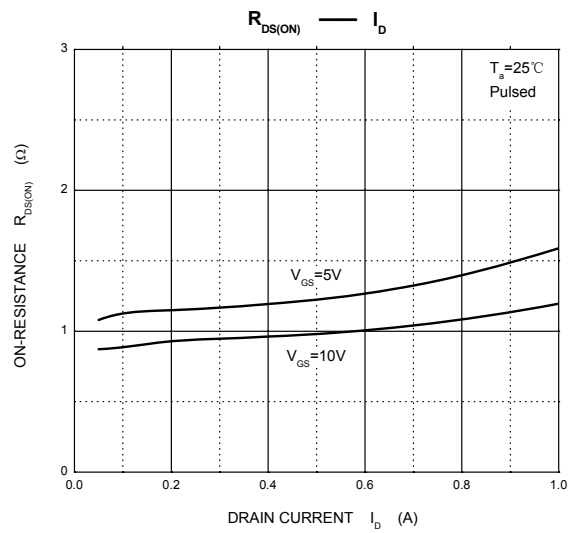
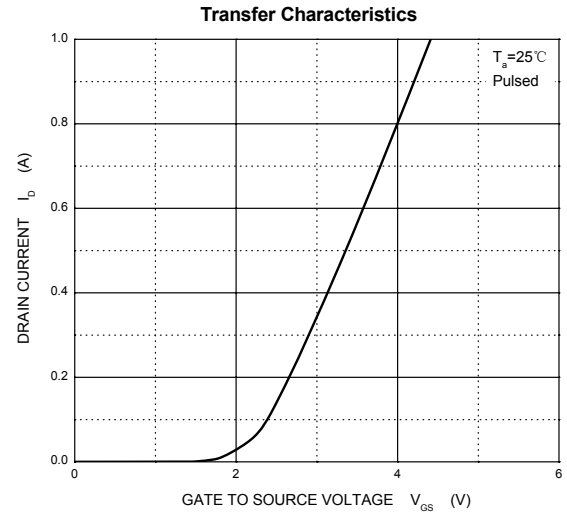
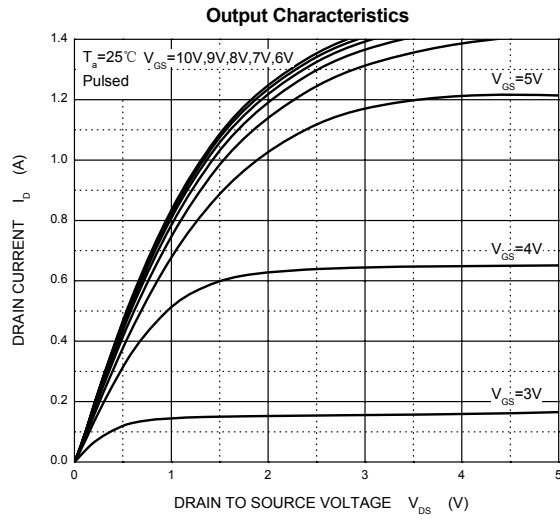
Parameter	Symbol	Value	Unit
Drain-Source Voltage	V_{DS}	60	V
Gate-Source Voltage	V_{GS}	20	V
Continuous Drain Current	I_D	115	mA
Power Dissipation	P_D	0.200	W
Thermal Resistance from Junction to Ambient	$R_{\theta JA}$	625	$^{\circ}\text{C/W}$
Junction Temperature	T_J	150	$^{\circ}\text{C}$
Storage Temperature	T_{stg}	-50 ~+150	

Electrical Characteristics at $T_A=25^{\circ}\text{C}$ unless otherwise specified

Parameter	Test Condition	Symbol	Min	Typ	Max	Unit
Drain-Source Breakdown Voltage	$V_{GS}=0\text{ V}, I_D=250\text{ }\mu\text{A}$	$V_{(BR)DSS}$	60			V
Gate-Threshold Voltage	$V_{DS}=V_{GS}, I_D=250\text{ }\mu\text{A}$	$V_{(GS)th}$	1	1.6	2.5	
Gate-body Leakage	$V_{DS}=0\text{ V}, V_{GS}=\pm 20\text{ V}$	I_{GSS}			± 80	nA
Zero Gate Voltage Drain Current	$V_{DS}=60\text{ V}, V_{GS}=0\text{ V}$	I_{DSS}			80	nA
On-state Drain Current	$V_{GS}=10\text{ V}, V_{DS}=7\text{ V}$	$I_{D(on)}$	500			mA
Drain-Source On-Resistance	$V_{GS}=10\text{ V}, I_D=500\text{ mA}$	$R_{DS(on)}$		0.9	5	Ω
	$V_{GS}=5\text{ V}, I_D=50\text{ mA}$			1.1	7	
Forward Trans conductance	$V_{DS}=10\text{ V}, I_D=200\text{ mA}$	g_{fs}	80			ms
Drain-source on-voltage	$V_{GS}=10\text{ V}, I_D=500\text{ mA}$	$V_{DS(on)}$			3.75	V
	$V_{GS}=5\text{ V}, I_D=50\text{ mA}$				0.375	V
Diode Forward Voltage	$I_S=115\text{ mA}, V_{GS}=0\text{ V}$	V_{SD}	0.55		1.2	V
Input Capacitance *	$V_{DS}=25\text{ V}, V_{GS}=0\text{ V}, f=1\text{ MHz}$	C_{iss}			50	pF
Output Capacitance *		C_{oss}			25	
Reverse Transfer Capacitance*		C_{rss}			5	
Turn-on Time*	$V_{DD}=25\text{ V}, R_L=50\Omega,$ $I_D=500\text{ mA}, V_{GEN}=10\text{ V}$ $R_G=25\Omega$	$t_{d(on)}$			20	ns
Turn-off Time*		$t_{d(off)}$			40	

*These parameters have no way to verify.

Typical Characteristics



Ordering information

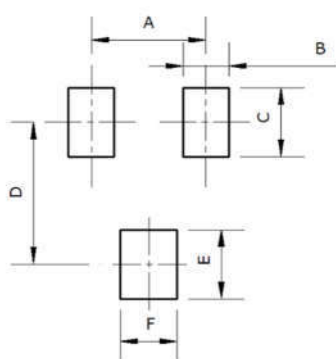
Package	Packing Description	Base Quantity	Packing Quantity
SOT-523	Tape/Reel, 7" reel	3000pcs/Reel	24000PCS/Box 120000PCS/Carton

Package Dimensions

SOT-523

Dim.	Millimeter (mm)		mil	
	Min.	Max.	Min.	Max.
A	1.50	1.70	59	67
B	0.75	0.85	30	33
C	1.45	1.75	57	69
D	0.50TYP		0.020TYP	
E	0.90	1.10	35	43
G	0.00	0.10	0	4
H	0.60	0.80	24	31
J	0.10	0.20	4	8
K	0.15	0.35	6	14
L	0.26	0.46	10	18

The recommended mounting pad size



Millimeter (mm)	
Dim.	TYP
A	1.00
B	0.40
C	0.60
D	1.24
E	0.60
F	0.50

Disclaimer

The information presented in this document is for reference only. Guangdong Youfeng Microelectronics Co.,Ltd. reserves the right to make changes without notice for the specification of the products displayed herein to improve reliability, function or design or otherwise. The product listed herein is designed to be used with ordinary electronic equipment or devices, and not designed to be used with equipment or devices which require high level of reliability and the malfunction of which would directly endanger human life (such as medical instruments, transportation equipment, aerospace machinery, nuclear-reactor controllers, fuel controllers and other safety devices), YFW or anyone on its behalf, assumes no responsibility or liability for any damages resulting from such improper use of sale. This publication supersedes & replaces all information previously supplied. For additional information, please visit our website <https://www.yfwdiode.com>, or consult YFW sales office for further assistance.